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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/393,122	09/10/1999	STEPHAN W. GEHRING	FANT-99-008	2263

7590 07/03/2002

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EXAMINER

SHAH, CHIRAG G

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 07/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/393,122

Applicant(s)

GEHRING ET AL.

Examiner

Chirag G Shah

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1 September 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1 and 7 rejected under 35 U.S.C. 102(e) as being anticipated by Hodzic (U.S. Patent No. (6,097,707).

Hodzic shows in column 4, lines 45-62, a single channel, star configuration, wireless digital communication network of cellular topology wherein a central control unit (master unit) is radio frequency linked to a plurality of remotely controlled units (slave units) and multiple access is synchronously controlled by the central control unit through a time division multiplexed cycle as claimed. In addition column 6 sections 1 and 2, sets forth the media access control protocol (MAC) and employs an adaptive TDMA process or cycle as claimed.

Art Unit: 2664

Furthermore, section 3 describes the frames format of HDLC that includes a start field, control field and a variable length data slot field.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C.: 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Hodzic (U.S. Patent No. 6,097,707) in view of Fellman (U.S. Patent No. 6,246,702).

Referring to claim 2, Hodzic teaches of a wireless digital communication network which includes a central (master) unit and plurality of remotely controlled (slave) units that sets forth MAC protocol and employs an adaptive TDMA process including frames format of a variable length. Hodzic fails to disclose that the MAC protocol further implements the Quality of Service to OSI layers above the MAC layer. Fellman teaches of a method for providing quality-of-service guarantees in computer networks, and discloses in column 5 of creating virtual isochronous channels within a CSMA/CD (Carrier Sense Multiple Access with Collision Detection) Ethernet network. This provides an arbitration mechanism to control access to the network for time-sensitive signals and to minimize or substantially eliminate collisions and guarantee quality of service. The CSMA/CD protocol is described in detail in IEEE 802.3 standard and is inclusive in the MAC layer protocol. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hodzic's invention

Art Unit: 2664

to include Fellman's teachings of creating virtual isochronous channels that provides arbitration mechanism to control access of network and guaranteeing quality of service.

5. Claims 3, 4, 5, 6, 8, and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Hodzic (U.S. Patent No. 6,097,707) in view of Watanabe (U.S. Patent No. 6,285,662).

Referring to claims 3, 4, 5, 6, 8, and 9, Hodzic fails to teach that MAC protocol further implements dynamic requisition, dynamic allocation and reallocation of variable-length data slots within frame and that the variable-length data slots of frame have a granularity of one bit. Watanabe teaches of a method for selecting a size of a contention window for a packet of data system where he discloses in column 3 lines 65 to column 4 lines 10, that sending station may transmit packets of data upon selected time slots defining random access channels of a MAC (medium access control) frame in which time slots are dynamically allocated on a frame-by-frame basis. The present invention utilizes the MAC protocol and since the invention is based on TDMA, it is possible to dynamically allocate and reallocate variable length data slots. It is also common knowledge that frames may be configured to have a granularity of one bit based on the MAC protocol. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hodzic's teachings to include Watanabe's teaching in order to utilize the MAC protocol to allocate and reallocate variable-length data slots.

6. Claim 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Hodzic (U.S. Patent No. 6,097,707) in view of Watanabe (U.S. Patent No. 6,285,662) as applied to claims 3, 4, 5, 6, 8, and 9 above, and further in view of Campbell (U.S. Patent No. 6,278,713).

Referring to claim 10, Hodzic in view of Watanabe teaches of a network communication system comprising of a central (master) unit and plurality of remotely controlled (slave) units that sets forth MAC protocol that employs an adaptive TDMA process including frames format that further implements dynamic allocation and reallocation of variable length data slots. Hodzic in view of Watanabe fails to disclose a frame within a TDMA comprising of a data slot section having a plurality of variable-length data slots comprising the step of periodically transmitting ALOHA message to invite protocol messages by the master device. Campbell disclose in the background information and column 1 of the ALOHA System, in its pure form, which is based upon a broadcast transmission followed by a listening period for an acknowledge signal from the receiving station. If no acknowledge signal is received, the transmitting station then retransmits randomly until it receives an acknowledgement signal indicating that successful transmission has been achieved. The ALOHA System, in its pure form, allows variable length data slots or frames to be transmitted. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify what Hodzic in view of Watanabe teaches to include the information disclosed by Campbell of the ALOHA protocol since the protocol allows for variable length data slots or frames to be transmitted.

Allowable Subject Matter

7. Claim 11 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2664

Conclusion

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703)305-3988, (for formal communications intended for entry)

Or:

(703)305-3988 (for informal or draft communications, please label "Proposed" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G Shah whose telephone number is 703-305-5639. The examiner can normally be reached on M-F 7:30 to 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 301-305-4366. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

cgs
June 19, 2002


Ajit Patel
Primary Examiner